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August 25, 2009

Mr. Ross Blanchard
Federal Highway Administration, Idaho Division
3050 Lakeharbor Lane, Suite 126
Boise, Idaho 83703

Ms. Victoria Jewell Guerra
Idaho Transportation Department
P.O. Box 7129
Boise, Idaho 83707-1129

Re: **Idaho 16, I-84 to Idaho 44 Draft Environmental Impact Statement and Draft Section 4(f) Evaluation (DEIS)**
EPA Project Number: 07-024-FHW

Dear Mr. Blanchard and Ms. Jewell Guerra:

The U.S. Environmental Protection Agency has reviewed the Idaho 16, I-84 to Idaho 44 Draft Environmental Impact Statement and Draft Section 4(f) Evaluation (DEIS). We are submitting comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Thank you for inviting our participation and accepting our comments at this time.

To increase capacity and reduce north-south travel times between I-84 and destinations north of the Boise River, the Federal Highway Administration (FHWA) and Idaho Transportation Department (ITD) propose to construct a new four-lane 7.45-mile highway segment that would extend Idaho 16 from Idaho 44 (State Street) to I-84 in Ada and Canyon Counties, Idaho. The proposed project would include a new roadway crossing of the Boise River and would primarily facilitate travel between I-84 and the communities of Eagle, Star, Middleton, Emmett, and proposed planned communities.

The proposed action alternatives are all alignment variations within the McDermott Road corridor, which runs north-south through low density rural residential and agricultural lands located between the Cities of Meridian and Nampa. The Preferred Alternative alignment, Alternative 2D Modified, resulted from a Value Engineering Study that recommended, among other modifications, using one rather than two bridges to cross the Boise River, and shifting the travel lanes to the center of the corridor. This would retain the 300-foot wide right-of-way (ROW), but would replace the originally proposed 78-foot-wide open median with a median barrier, thereby relegating all future expansion to the outside of the travel lanes rather than the inside.

We are rating the DEIS as EC-2, Environmental Concerns, Insufficient information. An explanation of the rating is enclosed with this letter. Our main concerns are that:

- The proposed bridge crosses the Boise River at a location that has a high value, biologically rich riverine, wetland, floodplain, and riparian habitat complex, and the four mile stretch of river at this location presently has good ecological connectivity. The project would have adverse direct, indirect, and cumulative impacts on this area. The Five-Mile and Ten-Mile Creek corridors would also be affected. More efforts are needed to avoid, minimize, and otherwise mitigate adverse impacts to habitats and water quality.
- Project-related air quality impacts, particularly the near roadway effects from emissions that would result from converting a two lane county road to a major highway corridor and commuter route, should be analyzed and disclosed.
- The proposed project should include multi-modal components, including public transit, designated non-motorized infrastructure, and Transportation Demand Management/Transportation System Management (TDM/TSM) strategies to reduce auto dependency and greenhouse gas emissions (GHGs).
- We believe there should be additional analysis and disclosure of indirect and cumulative impacts with respect to stimulated travel and growth. We believe the project is likely to facilitate and accelerate planned as well as unplanned development, much of which has the potential to be dispersive in nature. These impacts do not appear to be consistent with the "Community Choices" regional land use vision/plan.
- The project would result in direct, indirect, and cumulative losses of prime (if irrigated) farmland, which should be conserved pursuant to the Farmland Protection Policy Act.
- There is potential for impacts to the highly vulnerable, shallow groundwater aquifer due to potential accelerated growth and associated increased installation of individual septic systems and wells.

Thank you for the opportunity to offer comment on the Draft EIS and for your efforts to produce this NEPA document. We would welcome the chance to work with you further on the Idaho 16 project. If you have questions or would like to discuss these comments, please contact Elaine Somers of my staff at (206) 553-2966 or at somers.elaine@epa.gov, or me at (206) 553-1601 or at reichgott.christine@epa.gov .

Sincerely,

/s/
Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Enclosures

U.S. Environmental Protection Agency
Idaho 16, I-84 to Idaho 44 Draft EIS
Detailed Comments

Floodplains, wetlands, and water quality

Floodplains -- impacts on natural and beneficial values. The DEIS (p. 5-96) describes the conveyance of flood water as a primary value of the floodplain. Wetland habitats occurring within the floodplain are also indentified as a natural and beneficial value. While both of these are important values of floodplains, there are additional natural and beneficial floodplain functions and values that need to be considered. These include natural moderation of floods, water quality improvement through the exchange of surface water and shallow groundwater through the hyporheic zone, riparian habitat in addition to wetlands, open space, and, perhaps most importantly, providing a channel migration zone. River channels in alluvial floodplains are dynamic, not static. Changes in the river channel shape and location might occur slowly, through gradual erosion and accretion, or might occur quickly during high stream flows due to erosion of overflow channels, redirection of stream flows because of gravel bar development or woody debris, or anthropogenic changes to upstream channel conditions. The floodplain, and not just the floodway, needs to be available to accommodate these channel migrations in order to maintain a healthy aquatic ecosystem. The dynamic nature of an alluvial river is a fundamental factor needed for the quality and health of the aquatic ecosystem. Impacts of the project to all these values of the floodplain need to be addressed.

Recommendation: In the Final EIS, include analysis and disclosure of the full range of floodplain values, potential direct, indirect, and cumulative impacts to these values, and means and commitments to avoid, minimize, and otherwise mitigate these impacts. Specifically, where the DEIS (p. 5-96) discusses "Measures to Restore and Preserve Natural and Beneficial Floodplain Values Impacted by the Action", describe, in addition to flood conveyance, the measures to restore and preserve the additional values as described above, including but not limited to, natural moderation of floods, water quality improvement through the exchange of surface water and shallow groundwater through the hyporheic zone, riparian habitat in addition to wetlands, open space, and providing a channel migration zone.

Boise River floodway – regulatory requirements. The DEIS (p. 5-99) describes a possible need to make channel changes in order to achieve no increase in the floodway elevation above the maximum surcharge. The possible measures would all have adverse impacts on the River and its associated ecosystem, but these impacts are not identified in the DEIS. Measures that might be taken as a means to address one issue, but that would have additional adverse impacts on other resources, must be identified in order that accurate and adequate information is available to the public and decision makers. Other measures that could be taken to meet the regulatory requirements for the Boise River floodway need to be identified. These should include alternative bridge designs (such as, longer individual spans as well as a longer bridge) instead of just relying on changes to the channel. In addition, as described above, alluvial river channels are not static, and any modeling based on current channel and floodplain conditions or any predictions based on establishing certain channel configurations or conditions will have some range of error due to future changes in the channel shape and location. Instead of relying

on a static channel configuration, the bridge design should be based on accommodating flooding and channel migration over a wide range of changing conditions across the floodplain. Such a design might need to span a much larger area than currently anticipated.

Recommendations:

- Analyze and disclose the impacts of the various means by which the project proponents would propose to achieve no increase in the floodway elevation above the maximum surcharge.
- Identify other alternative means to meet the regulatory requirements for the Boise River floodway. These should include alternative bridge designs with longer individual spans, and a longer bridge that would accommodate flooding and channel migration over a wide range of changing conditions across the floodplain.

Water quality – Lower Boise River TMDL. The DEIS, (p. 5-101) does not indicate whether the pollutant loads anticipated from the proposed project have been allocated in the Lower Boise River TMDL. The DEIS does state that BMPs (discussed in Section 5.18 of the DEIS) must be implemented in order to comply with the TMDL for sediment.

Recommendation: Clarify in the Final EIS whether the pollutants that would be generated from the proposed project have been allocated in the Lower Boise River TMDLs for sediment and bacteria.

Surface water – construction impacts. The construction impacts discussed in the DEIS (p. 5-104, line 4), such as, for pile driving, pier construction, etc., can be avoided. Any work areas in water would need to be isolated from flowing water. Channel grading is not acceptable because of adverse impacts to water quality and stream habitat.

Recommendations:

- In the Final EIS, describe the measures to avoid impacts, or defer to permitting requirements for such activities.
- Visit the EPA Region 3 *Green Highways* website at www.greenhighways.org for more ways to avoid and minimize these and other environmental impacts.

Wetlands -- impacts. In the DEIS (p. 111, Table 5-33), it appears, based on the information presented in this section as well as elsewhere in the NEPA document, that the area of wetland impacts were estimated based on a footprint of a certain width (300 feet wide except for 220 feet wide at Boise River bridge). While this might be an appropriate methodology for comparing alternative locations, it does not provide adequate information to evaluate design alternatives to avoid/minimize wetland impacts. Even though these details might not be available until further design is completed, project proponents must recognize that bridge design and construction methods will still require further efforts to avoid/minimize wetland impacts. Estimating wetland impacts in the DEIS by calculating a footprint will not be sufficient for a Section 404(b)(1) analysis.

As stated in the DEIS (p. 5-115, line 26), we agree that "the severity of functional impacts proposed for the Boise River wetlands is high." This will continue to be an important

factor in evaluating alternative designs and mitigation for any selected alternative. Longer bridge spans, reduced bridge widths, and alternative construction methods will all need to be evaluated to reduce wetland impacts from filling, dredging, and construction.

Recommendation: Pursue further efforts, in collaboration with resource agencies, to avoid and minimize wetland impacts, including but not limited to, longer bridge spans, reduced bridge widths, and alternative construction methods.

Wetlands -- only practicable alternative finding. The DEIS finding (p. 5-118, line 12) cannot be made at this time because there is no documentation that all practicable measures to minimize harm to wetlands have been taken. As described above, we recognize that the DEIS might provide adequate documentation to select a preferred location for a crossing of the Boise River, but the details of all practicable measures to minimize harm have not yet been described or determined. As we described above, these additional measures relate primarily to bridge design, but they are factors (such as longer bridge spans, longer bridge, and alternative construction methods) that could add substantial cost to the project.

Recommendation: It should be stated that the practicable alternative finding is only related to location and that a final determination on practicable alternative will be based on further design alternatives. Additional wetland compensatory measures could also be needed (see below).

Wetlands – mitigation. We appreciate that project proponents have identified potential wetland mitigation measures. However, this mitigation plan should be clearly identified as a conceptual plan at this time. There are many requirements of the Cops of Engineers/EPA Final Rule for Compensatory Mitigation for Losses of Aquatic Resources that will need to be included, such as, a watershed approach and determining ecological suitability, that could affect the selection of a mitigation site. It should also be noted that compensatory mitigation for forested wetlands in the Boise River valley will be extremely difficult. EPA is not aware of any forested wetland mitigation efforts that have been successful to date in this area.

Recommendation: Project proponents should begin efforts as soon as possible to develop an acceptable wetland mitigation plan and begin efforts to implement forested wetland mitigation. We believe that substantial time and effort will be required to show success in this aspect of any wetland mitigation.

Groundwater/Drinking water

Groundwater vulnerability for the entire study area is classified as high to very high (p. 4-38) and the shallow and deep aquifers are the primary source of drinking water in the area. Current land use in the project area is low density rural residential and agriculture. We are concerned that, with accelerated growth potentially stimulated by the proposed project and the associated need for individual wells and septic systems, there is potential for impacts to the highly vulnerable, shallow groundwater aquifer. While current regulatory mechanisms (e.g., local zoning ordinances, building codes) are generally considered adequate to address this, it may be wise to review existing controls to ensure that groundwater protections are adequate to address conversion to urban/suburban densities and land uses.

Recommendation: Consider engaging and collaborating with local governmental entities to examine existing codes, zoning, and other regulatory mechanisms to determine whether there is need to strengthen controls to ensure that groundwater/drinking water resources are adequately protected from rapid development and land use change.

Need for ecological connectivity/permeability, preferred alternative design

We are concerned that the proposed new highway would create a significant new barrier in the landscape that would impede the movement of species and other natural ecological processes. The proposal in the Preferred Alternative, 2D Modified, to replace the 78 foot wide open median with a median barrier would exacerbate this fragmentation. Such a design would cause unavoidable vehicular-wildlife collisions whenever animals attempt to cross the roadway. This would pose a serious safety issue for both people and wildlife.

There are ways to provide permeability to mitigate these impacts. Wildlife crossing structures that are properly located and designed for species in the project area (particularly mule deer, a variety of other resident mammals, and amphibians such as Woodhouse's toad, p. 5-123) can and should be incorporated into the project design. Crossings are often installed where stream crossings, wetlands, canals, or other sensitive features occur because wetlands, riparian areas, high value habitats, and open space are natural attractants and corridors for wildlife movement. Most often, bridges, culverts, and underpasses are designed to accommodate upland terrestrial species movement, as well as to provide fish passage and hydrological connectivity. Depending on the species, the location of movement corridors, and topography, solutions for wildlife movement can range from small amphibian tunnels to highway overpasses. A roadway fencing plan should also be included to funnel wildlife to the crossing structures and prevent their entry onto the roadway.

If a median barrier is used, to provide a measure of permeability for animals that do enter the roadway, it could be installed in a "dashed line" rather than a solid line configuration to provide intermittent openings that accommodate animal passage. Rumble strips could be added, either continuously or just at the median barrier openings, to avert head-on vehicular collisions.

Recommendations: Incorporate design modifications that would increase the permeability of the roadway for wildlife movement and still meet safety needs. We recommend adopting the following:

- Install wildlife crossing structures at strategic locations and in consultation with Idaho Fish & Game Department (IDFG) and US Fish & Wildlife Service (USFWS). River and stream corridors with riparian areas, floodplain, and wetlands are the most heavily used wildlife movement corridors in the project area. It would be feasible and efficient to install wildlife crossings where hydrological connectivity structures, such as bridges, large box culverts, and/or oversized culverts, are already planned. Moderate adjustments in size (span/length, width, and height) can be made to provide adequate opening and upland area for the passage of terrestrial species. Include fencing appropriate to funnel animals to the crossing locations and prevent entry onto the roadway.
- Install an intermittent median barrier, i.e., barrier with gaps that create, in effect, a dashed line rather than a solid line down the middle of the roadway. Consider adding rumble

strips to prevent head-on vehicular collisions, at least where there are openings in the median barrier.

Need for transit, multi-modal solutions, and reduction of greenhouse gas (GHG) emissions

We support the CIM goal of reducing peak-hour, single occupancy vehicle (SOV) trips by 25% by 2020. To meet this goal, it would seem that the proposed project should include public transit and non-motorized infrastructure, rather than just "allowing for" this possibility in the future. Every feasible effort should be made to bring about greenhouse gas (GHG) reductions, and these efforts will be effective only if every jurisdiction contributes meaningfully. In addition to reducing GHGs, multi-modal features would help to reduce auto dependency, dispersed development, air and water pollution, and would foster transit oriented development, compact, walkable, livable communities, and conserve farmland, habitat, and open space.

Recommendation: Incorporate new/increased public transit service and Park and Ride facilities, dedicated non-motorized (bicycle/pedestrian) infrastructure, and TDM/TSM strategies into the proposed project. Take measures to increase system efficiency and maximize the use of existing infrastructure. For example, consider synchronizing traffic signals on arterials.

Air quality/air toxics

The DEIS states (p. 5-78) that, "The proposed action will not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts." It is acknowledged that localized increases and decreases in MSAT emissions may occur, but these are dismissed due to implementation of EPA vehicle and fuel regulations. Consequently, there is no analysis or disclosure of the project-induced changes in pollutant emissions and resulting air quality effects within the project corridor.

Conversion of the McDermott Road corridor from a two-lane county road serving only local travel to a major state highway thoroughfare for commuters with frontage roads and interchanges, would result in a substantial increase in near-roadway vehicular emissions, including MSATs and diesel exhaust. These issues are of concern because air toxics emissions, particularly diesel exhaust, are known or suspected to cause cancer or other serious health effects, such as respiratory, neurological, reproductive, and developmental effects.

Recommendations:

- In the Final EIS, characterize, analyze, and disclose the change in traffic volumes and air emissions that would occur within and near the proposed project corridor, for both the on- and off-McDermott Road alignments, as compared to the No Action near-roadway air quality conditions in the McDermott Road corridor. This analysis should be done for criteria pollutants as well as for MSATs. Ensure that the analysis distinguishes between project induced emission changes vs. changes caused by fleet turnover and more stringent new vehicle emissions standards.
- Discuss the cancer and non-cancer health effects from MSATs and diesel emissions.
- Identify the receptor locations and populations for both project construction and operation. This should include, but not be limited to, sensitive receptors (such as schools,

outdoor recreation areas, hospitals, senior and day care facilities, etc.) of the near-roadway air pollutants.

Construction mitigation for air quality. There are now many opportunities, several of which are inexpensive and easy to implement, to reduce the effects of project construction. Please see the Clean Construction USA website at http://www.epa.gov/otaq/diesel/construction/. At this website are examples of construction mitigation measures not included in the DEIS. The website also includes case studies and examples of institutional arrangements for implementing this mitigation.

Recommendation: Augment the construction mitigation measures listed in the Draft EIS to include additional mitigation measures listed on the above website, and commit to their implementation.

Indirect and cumulative effects -- stimulated travel and growth

We are concerned that the proposed project, as currently designed for privately owned vehicle (POV) use to/from outlying communities, is likely to result in stimulated travel, growth, and related impacts to air, water, land resources, and wildlife. These impacts have not been sufficiently analyzed or disclosed in the DEIS. We agree with the statement in the DEIS (p. 5-19) that improved connectivity between both sides of the Boise River would reduce commuting time and increase the potential for development beyond the study area. However, the DEIS includes no analysis of the potential amount, nature, and location of these indirect effects, and provides no support for the conclusions that growth and project area population would be the same with or without the project, and that there would be no indirect impacts to surface water resources, or to the 100-year floodplains with the Action Alternatives (p. 5-102, 5-103).

Based on existing research on stimulated travel (Hansen et al, 1993; Goodwin, 1996; TRB, 1995) it is reasonable to expect:

- an increase in vehicle miles traveled (VMT);
- an increase in the number and length of trips;
- an absorption of all new capacity within about five years of the change in road supply;
- an increase in the rate of growth due to travel time savings from increased road capacity.

Based on the above, we may also see:

- an increase in fuel consumption and GHG emissions once the new capacity is absorbed and traffic becomes congested;
- an increase in the number and severity of vehicle collisions, due to increased traffic volume and speed;
- an increase in dispersed development and its associated impacts to land, water, and air resources; and
- increased auto dependency, auto-oriented development, and demand for more capacity.

Recommendations:

- Using an appropriate identified methodology (see FHWA's website for a list of methods), analyze and disclose in the Final EIS the potential indirect and cumulative effects of the proposed project on travel, growth, and related impacts to air, water, land resources, fish and wildlife, and ecosystem functions/services.
- Consider working proactively with local governments to identify and address potential unplanned, dispersed development to ensure adequate environmental protection and natural resource conservation.

Loss of prime farmlands

Direct impacts to prime (if irrigated) farmland from the proposed project would result from the acquisition of 661 to 686 acres for right of way (ROW) and an additional 55 to 73 acres of farmland that would be lost due to making parcels impractical to farm. The indirect impacts to farmland, due to stimulated travel and growth, would likely be much greater. The NRCS ratings for these farmlands all exceed 160 points, which call for action to conserve affected farmlands. Only Canyon County's comprehensive plan (2005) includes policy to "Encourage the protection of prime agricultural land for the production of food." It is unclear in what way and to what extent the proposed project is responding to the need to conserve farmlands in accordance with the Farmland Protection Policy Act. The DEIS also does not discuss the social, economic, and environmental consequences of these farmland losses.

Recommendations:

- In the Final EIS, identify measures taken to avoid and minimize impacts to farmlands that would be affected by the proposed project.
- Include in the Final EIS an analysis of the social, economic, and environmental effects of project-related direct, indirect, and cumulative farmland losses.
- Consider engaging proactively with affected local governments to address farmland conservation requirements and policies.

Invasive species

Vegetation removal and soil disturbance from project construction would enable invasive weeds to become established. The EIS should identify management actions that would be taken to comply with Executive Order 13112 on Invasive Species.

Recommendation: Provide analysis and disclosure in the Final EIS regarding the location and extent of project-related site disturbance, habitats that would be especially vulnerable to and negatively impacted by weed invasion, and measures to prevent and control outbreaks of invasives.